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13. SUPPLEMENTARY NOTES

14. ABSTRACT The primary research aims are to examine the early longitudinal course of PTSD symptoms and test hypotheses regarding risk factors for chronic PTSD in military personnel returning from Iraq or Afghanistan. To date, 152 subjects have completed baseline interviews; 6, 12, and 24 month interviews have been completed for 110, 66, and 24 participants respectively. Preliminary findings from analyses of 100 baseline and 81 6 month follow-ups show that while 17% met full criteria for PTSD, over half reported 3 or more symptoms of PTSD at baseline, with symptoms of hyperarousal the most common. Total CAPS scores decrease significantly from baseline to 6 and 12 months; rates of remission for individual symptoms were variable, ranging from 3% to 36%. PTSD symptoms were significantly associated with psychosocial impairment. Psychosocial variables showing significant associations with PTSD include pre-deployment trauma, severity of warzone trauma exposure, lower post-deployment social support, and higher post-deployment life stress.

15. SUBJECT TERMS
Posttraumatic Stress Disorder, mental health, longitudinal research

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Introduction: The purpose of this first phase of longitudinal research is to examine the early longitudinal course of PTSD in military personnel after their return from Iraq or Afghanistan, and to test hypotheses regarding risk factors for chronic PTSD. The study aims to recruit and comprehensively assess 300 National Guard and Reserve troops recently returning from deployment, and to obtain follow-up assessments of symptomatic course, functional outcomes, treatment utilization, and ongoing social support and life stress at 6, 12, and 24 months post return.

Body: Recruitment and follow-up assessments have continued over the reporting interval. As of 7/22/08, 152 participants have agreed to participate, signed informed consent, and completed baseline interviews (Task 1—in progress). An additional 28 new potential participants have agreed to be contacted; 5 of these are currently scheduled for baseline assessments. Six month, 12 month, and 24 month follow-up assessments have been completed for 110, 66, and 24 participants respectively (Task 2, in progress). The response to the study continues to be excellent in terms of command support (willingness to allow us to speak to the soldiers to present the study) and in terms of the interest and response among soldiers. Recruitment over the past year has taken place primarily during redeployment debriefings held by the Rhode Island National Guard (RING). Current recruitment efforts are focused on a RING unit that returned in June 2008. Another unit is scheduled to return to Rhode Island in September of 2008, and we anticipate continuing success with recruitment from these two units.

Data entry, verification, and editing continue (Task 3a). Preliminary analyses have been conducted using fully processed baseline data for 100 participants, 6 month data for 81 participants, and 12 month data for 51 participants (Task 3b and 3c). We provide a summary of these preliminary findings in the following and in the appendix.

Current sample

The majority of participants (135 of 152, 89%) recruited to date served in the Rhode Island National Guard (RING), and were recruited directly from the military units following return from deployment in Iraq. Our study sample is nearly identical to the total (RING) in terms in proportion of Caucasians (89% vs 90%), proportion of African American and other minorities (11% vs 10.1%) and mean age (33.8 vs 33).

Traumatic Exposure in the War-Zone

Data on trauma exposure during the most recent deployment, assessed by the Combat Experiences Scale (3) showed that the majority (95%) reported being in serious danger at least once (60% were in serious danger many times). Participants were exposed to a range of life-threatening or other potentially traumatic experiences (table 1).

Table 1: Rates of War Zone Trauma Exposure Combat Experiences Scale	N=77
Attacked or ambushed	67%
Small arms fire	82%

Clearing homes / bldgs	51%
IED/booby trap exploded nearby	77%
Seeing dead bodies / remains	76%
Handling / uncovering human remains	36%
Knowing someone injured or killed	70%
Seeing dead / seriously injured Americans	65%
Member of unit casualty	50%
Witnessing accident (injury or death)	48%
Responsible for death of enemy	21%
Responsible for death of non-combatant	4%

Baseline data: PTSD Diagnosis and Symptoms
Based on the *Clinician-Administered PTSD Scale*, 17% of our subjects met full criteria for PTSD related to deployment experiences during the month post-deployment. One additional subject, not included with the 17%, had lifetime PTSD prior to deployment. Most subjects reported some clinically significant symptoms -- 86% had at least one deployment related PTSD symptom (moderate or worse severity), 57% had at least 3, and 35% had 5 or more. Symptoms of hyperarousal were the most frequent (Table 2), particularly hypervigilance (58%), exaggerated startle (53%), difficulty falling or staying asleep (49%), and irritability and anger (48%). In terms of PTSD symptom clusters, 80% of subjects reported one or more symptoms from the hyperarousal (D) symptom cluster, 44% endorsed one or more re-experiencing (B) symptoms, and 53% endorsed one or more Avoidance (C) symptoms.

Table 2 Baseline Deployment Related PTSD Symptoms	**N=100**
Re-experiencing (B) Symptoms	
Intrusive recollections	18%
Distressing dreams	21%
Flashbacks	14%
Psychological distress related to cues	22%
Physiological distress related to cues	22%
Avoidance (C) Symptoms	
Avoid thoughts, feelings	28%
Avoid places, people	16%
Unable to recall aspects of trauma	12%
Loss of interest	16%
Detached / estranged from others	22%
Restricted range of emotion	26%
Hyperarousal (D) Symptoms	
Difficulty falling or staying asleep	49%
Irritability and Anger	48%
Difficulty concentrating	20%
Hypervigilance	58%
Exaggerated startle response	53%

***Other Axis I Disorders*:** The most frequent Axis I diagnoses beside PTSD were Major Depressive Disorder (MDD) and Alcohol abuse or dependence. 14% had current MDD at baseline, and an additional 14% had prior MDD. The rates for any mood disorder were 17% current and 16% past. 5% reported current alcohol abuse, 2% current alcohol dependence; 32% reported a history (not current) of alcohol abuse or dependence. Drug abuse or dependence, largely overlapping with the alcohol problems sample, was present in 3% (current) and 17% (past). Anxiety disorders other than PTSD were present in 7% (current), with 4% reporting past anxiety disorders.

***Psychosocial Impairment*:** Both the diagnosis and symptom severity of PTSD were significantly associated with impairment in psychosocial functioning. The mean score on the Global Assessment Scale (GAF) was 48.1 ($\pm$ 6.3) for those with PTSD, compared to 61.7 ($\pm$ 10.8) for those without PTSD ($t = 6.28$, $p < .0001$). Those

with PTSD also had significantly poorer adjustment on the LIFE global social adjustment, recreation, and life satisfaction scales. Correlations of symptom severity from the CAPS were significant for the GAF (r = -.73), global social adjustment (r = .53), friends (r = .25), satisfaction (r = .41), and recreation (r = .49).

***Follow-up Data: PTSD Diagnosis and Symptoms*:** Of the 81 subjects with 6 month data, 13 had deployment-related PTSD at baseline. Four of the 13 (31%) did not meet PTSD criteria at 6 months. Of 51 subjects with 12 month data, nine had PTSD at baseline; four of the nine (44%) no longer met criteria at 12 months.

PTSD symptoms showed varying rates of remission over 6 months. Flashbacks, diminished interest, and restricted range of affect had the highest rates of remission (36%, 31%, and 30% respectively). Anger was the most persisting symptom, with only 1 of 38 subjects (3%) with this symptom losing it by 6 months. Physiological reaction to triggers and avoidance of reminders (activities) also had low rates of remission (7% and 8%). Rates of new onsets were generally low at the diagnostic and symptom level. Two new cases met threshold criteria for PTSD at 6 months and 1 at 12 months; the total percent with PTSD at 12 months was 15%, close to the 16% rate in the sample with 6 month data. In addition to being least likely to remit, anger / irritability was the most likely of all symptoms to newly onset over 6 months (10% with new onset over 6 months), making it the most frequent symptom (52%) at 6 months post deployment.

There was a significant decrease in severity in PTSD symptoms from baseline to follow-up, as measured by the CAPS total score. For the 81 subjects with six month data, the baseline mean was 26.5 (SD=22.8) and the six month mean was 24.2 (SD=23.4) (t=2.17, p=.03). For the 60 subjects with 12 month data, the CAPS score changed from 24.6 at baseline to 20.4 at 12 months (t=2.08, p=.04).

***Mental Health Treatment*:** Of 81 subjects with available data, 26 (32 %) received some form of outpatient mental health treatment within the first six months of their return. This percent is very close to reports from large samples of OIF soldiers (119). Of the 26 receiving treatment, 20 received individual treatment with or without medication, and 12 received medication only. 18 (68%) of the 26 receiving mental health treatment received it from the VA; 5 (20%) received treatment from the Vet Center and the remainder from private mental health or other medical professionals.

Psychosocial correlates of PTSD diagnosis and symptoms

Demographic Variables*:* Analyses of demographic variables showed only level of education (lower) to be associated with PTSD (X^2 = (3) 9.5, p = .02). Age, race or ethnicity, and marital status were not related. The number of women in the sample is too small to estimate differences by gender.

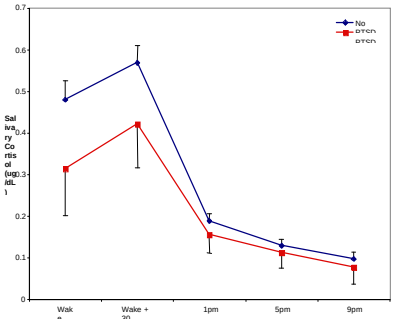
Pre-deployment variables: Consistent with prior research, the pre-deployment life events scale from the DRRI was significantly correlated with the CAPS total score (r=.29, p=.018).

Deployment-Related -- War-Zone Trauma and Contextual Factors**:** Also consistent with previous findings in the literature, severity of trauma exposure was a strong predictor of PTSD in terms of diagnosis and number of symptoms. Mean scores and standard deviations of items from the Hoge Combat Experiences Scale (possible range of 0-52) were 25.2 (4.1) and 14.4 (10.6) for those with and without PTSD, respectively ($t = 5.6$, $p < .0001$). The Hoge Scale score was also significantly correlated with the CAPS total score ($r = .47$, $p < .0001$). Deployment related DRRI scales significantly correlated with the CAPS total score include deployment environment ($r=.41$, $p < .001$), relationships within unit –sexual issues ($r=.26$, $p=.04$), deployment concerns (perceived threat, safety) ($r=.48$, $p < .0001$), and exposure to nuclear, biological, chemical agents ($r=.37$, $p=.006$). Life and family concerns while in the war zone showed a non-significant correlation of .23, and relationships within unit (not sexual issues) a non-significant correlation of .20. Training and deployment preparation were not related ($r = -.05$).

Post-Deployment: The CAPS score was significantly associated with the DRRI scales of postdeployment support ($r=-34$, $p=.006$) and life events ($r=.55$, $p<.0001$).

As described in our last report (July 2007), an add-one study was funded by the USAMRMC to collect data for genetic and stress hormone (cortisol) factors as risk factors (Audrey Tyrka, M.D. Principle Investigator). Recruitment for the add-on study began about 6 months after the main study. Response has been excellent with 125 providing samples for genetics, and 96 with complete cortisol samples to date. The following is a brief summary of preliminary findings from the add-on study.

***Genetic*s**: Genotyping of the dopamine transporter polymorphism has been completed for 75 subjects. The allele frequencies were in Hardy-Weinberg equilibrium. Preliminary analyses for the dopamine transporter polymorphism in the 75 subjects with available data revealed a significant effect of the gene on the prediction of the number of trauma-related PTSD symptoms ($T (25.3)=3.47$, $p<.005$) such that subjects with one or two 10 repeat alleles had more symptoms of PTSD than those with no 10 repeat alleles. There was also a numerically greater number of subjects with one or two 10 repeat alleles who met full diagnostic criteria for PTSD (5/19 and 9/35 versus 0/7, respectively) but this did not reach significance with this modest sample size. Given concerns regarding population stratification, we repeated the analyses with the 57 Caucasian non-Hispanic subjects and found that the significant effects remained.



Cortisol: Cortisol data for 48 subjects are available presently for analysis. Seven of the 48 met the diagnostic criteria for PTSD. The participants with PTSD had non-significantly lower cortisol concentrations upon awakening and 30 minutes following awakening (Figure to right). The effect sizes were $d=.45$ and $d=.32$, respectively.

These preliminary analyses are support several of our hypotheses, including 1) at least 50% of those with PTSD will show a persisting pattern; 2) Symptoms of hyperarousal will be the most persistent of the 3 symptom clusters; 3) Risk factors for PTSD include

severity of war-zone trauma, predeployment (including childhood) trauma, lower levels of social support and higher levels of life stress post-deployment. We do not find minority status or younger age to be associated with PTSD. Limitations include the preliminary nature of these analyses (based on small sample size), and the absence of longer follow-up. Continued recruitment and completion of further follow-ups on larger numbers of subjects will allow us to increase our knowledge regarding the early course of PTSD, determine the relative contribution of specific factors that increase risk for chronic PTSD following war-zone trauma, and examine the time-varying associations between risk factors and PTSD outcome over a longer period of time.

Key Research Accomplishments:

- Documentation of presence and degree of persistence of symptoms of PTSD in the early post-deployment period in this sample consisting predominantly of National Guard soldiers.
- Preliminary findings of associations between several hypothesized risk factors and PTSD.

Reportable Outcomes:

There are no publications to date, as we have not completed our sample recruitment and at the time of this report do not have a sufficiently large number of subjects for publishable findings.

Presentations:

- Shea MT, Musto W, Sevin M. Identification of Risk Factors for Chronic PTSD. Presented to Adjutant General Bray and staff, Rhode Island National Guard, June 10, 2008. (see appendix).

Grant Submitted:

- "Onset and Maintenance of PTSD in Iraq Veterans: A Longitudinal Study of Psychosocial and Biological Risk Factors". Submitted to the National Institute of Mental Health, June 5, 2008.

Conclusion:

Although these preliminary data are based on a small sample, the findings are consistent with many of the hypotheses. The study design provides several advantages, including rigorous assessment of PTSD symptoms and additional Axis I disorders using validated structured clinical interviews, systematic assessment of the course of all PTSD symptoms and of additional Axis I disorders, comprehensive assessment of psychosocial impairment and of all treatments received, and assessment of key psychosocial and biological variables postulated to increase risk for onset and maintenance of PTSD. Findings from this study should increase the ability to identify those at higher risk for long term problems with PTSD, critical to targeting early interventions.

References:

N/A

Appendices:

(1) Risk_Poster_General_Mtg.ppt

Identification of Risk Factors Study

- M. Tracie Shea, PhD
  Principal Investigator
- Wally Musto, CMSgt(Ret)
  Project Coordinator
- Mimi Sevin
  Clinical Project Coordinator

Background

- War related PTSD is frequently a debilitating disorder.
- Half of the 30% of troops with PTSD following the Vietnam War showed a persisting chronic course.
- Reports of PTSD in troops returning from Iraq suggest rates in the range of 12% to 17% upon return, with higher rates at 3 month assessments, particularly for the National Guard and Reserves.

Research Objectives

- We are examining the frequency and early longitudinal course of PTSD symptoms in a target sample of 300 National Guard and Reserve troops following return from Iraq or Afghanistan.
- Additionally we are testing several hypotheses regarding risk factors for a chronic course of PTSD.
- An add-on study (Audrey Tyrka M.D, Brown University & Butler Hospital) includes assessments of biomarkers (genetics and cortisol).

Description of the study

- The target study sample is 300 male and female National Guard or Reserve military personnel who have recently returned to the United States from Iraq or Afghanistan.
- Participants are recruited at initial or follow-up demobilization briefings for returning troops of the RI National Guard, Marine Reserves in Rhode Island and Army Reserve in Massachusetts.
- Participants are informed of all details of the study during the recruitment phase and an emphasis is made that this is a study and not considered treatment.
- Trained interviewers complete baseline interviews, and follow up interviews at 6, 12 and 24 months post return from deployment.

Description cont.

- Participants undergo comprehensive assessments of pre-deployment symptoms (pre-existing symptoms)
- We also look for risk factors for developing PTSD as well as examine the symptomatic course of PTSD and other coexisting psychiatric disorders.
- Additionally, assessments of the subject's psychosocial functioning level, treatment received, social support, and life stress are conducted.
- Our primary measure of PTSD and associated symptoms is the Clinician-Administered PTSD Scale (CAPS). The CAPS includes a lifetime trauma checklist, questions about stressor exposure, and assesses frequency and severity of current and lifetime symptoms of PTSD.

Description cont.

- Co-existing psychiatric disorders, including alcohol abuse/dependence, are assessed at the baseline interview using the Structured Clinical Interview of DSM IV Disorders (SCID) and at follow up interviews using the Longitudinal Interval Follow-Up Evaluation (LIFE), a semi-structured interview rating system for assessing the longitudinal course of other mental disorders.
- A number of self-report questionnaires are completed at baseline and follow up interviews to assess health status, childhood lifetime trauma, personality traits, family relationships, interpersonal support, peritraumatic dissociative experiences and distress, scales assessing various aspects of deployment experiences, and severity of current psychological distress.

Results

- 148 participants have completed baseline assessments, 105 have completed 6 month, 63 have completed 12 month and 5 have completed 24 month assessments.
- 18% of our participants were recruited during the veteran's initial demobilization, 69% were recruited during a follow up demobilization, and the remaining 13% were self-referred (e.g. heard about the study from other subjects). Nearly all (99%) returned from deployment in Iraq.

RING	**Mass Army Reserve**	**RI Marine Reserve Unit**
Total - 89%	***Total - 4%***	***Total - 7%***
Army Aviation – 2 %	883rd Combat Stress	Support Motor Transp. Co
861st Engineers – 15%		
172nd Mountain Co (now 200th) – 16%		
43rd MP – 19%		
1207th Transp. Co – 37%		

Results cont.

- Data presented here are from 100 of these participants at baseline as well as 81 of these participants at the 6 Month time point.
- Veteran ages ranged from 21 to 57 years old (mean age=35, SD +/- 9.12).
- 26 % are high school graduates, 48% attended some college or have an associate's degree, 15% are college graduates and 11% earned a post graduate degree.
- 40% are married and 60% unmarried.
- 16% reported deployments prior to the most recent, including 16% to Iraq, 1% to Afghanistan, 8% to the First Gulf war, and 10% other combat related deployment.

Risk Factors Sample		**RI Air National Guard**		**RI Army National Guard**	
Gender		***Gender***		***Gender***	
Male	95%	Male	84%	Male	90.7%
Female	5%	Female	16%	Female	9.3%
Ethnicity		***Ethnicity***		***Ethnicity***	
Caucasian	89%	Caucasian	74%	Caucasian	88%
Minority	11%	Minority	26%	Minority	12%
Hispanic	15%	Hispanic	5.6%	*Hispanic included in with Caucasian*	

Trauma Exposure Results

- Furthermore we are presenting data for 77 participants from the Hoge Combat Experiences Survey which is an assessment created by Colonel Charles Hoge, Director of the Division of Psychiatry and Neuroscience, Walter Reed Army Institute of Research.
- The Hoge is used to assess exposure to various aspects of war-zone trauma and developed specifically to assess exposure to combat and other war zone experiences in Iraq and Afghanistan.
- Data showed that the majority (95%) reported being in serious danger at least once (60% were in serious danger many times).

Rates of War Zone Trauma Exposure

- Participants were exposed to a range of life-threatening or other potentially traumatic experiences

Attacked or ambushed	67%
Small Arms Fire	82%
Clearing Homes/bldgs	51%
IED exploded nearby	77%
Seeing dead bodies	76%
Handling human remains	36%
Knowing someone injured or killed	70%
Seeing dead/seriously injured Americans	65%
Member of unit casualty	50%
Witnessing accident	48%
Responsible for death of enemy	21%
Responsible for death of non-combatant	4%

PTSD Diagnosis

- In order to diagnose a participant with Post Traumatic Stress Disorder the soldier must meet certain criteria.
- They must be exposed to a traumatic event during which there a life threat to self or others, serious injury to self or others or threat to the integrity of self or others.
- And as a result of this exposure the person would endorse experiencing an intense emotional reaction of helplessness, fear or horror during or after the event.

PTSD Diagnosis cont.

- Additionally the participant would also have to endorse experiencing a certain number of psychological/physical symptoms to meet full criteria for PTSD.
- A participant must endorse experiencing at least 1 Re-experiencing (B) symptom.
- At least 3 Avoidance (C) symptoms.
- At least 2 Hyperarousal (D) symptoms.
- These symptoms must occur at least once or twice a month and cause at least a moderate degree of distress or impairment in the participant's life to count towards a diagnosis.

PTSD Baseline Results

- During the first month of return 17% of our subjects endorsed full criteria for PTSD related to deployment experiences.
- Rates of individual PTSD symptoms present at baseline (moderate or worse level of severity) were assessed by the CAPS. Symptoms of hyperarousal were the most frequent, particularly hypervigilance (58%), exaggerated startle (53%), difficulty falling or staying asleep (49%), and irritability and anger (48%).
- 80% reported one or more symptoms from the hyperarousal (D) symptom cluster, 44% endorsed one or more re-experiencing (B) symptoms, and 53% endorsed one or more Avoidance (C) symptoms.

Baseline Deployment Related PTSD Symptoms

Re-experiencing (B) Symptoms	
Unwanted Memories	18%
Distressing Dreams	21%
Flashbacks	14%
Psychological Reaction to cues	22%
Physiological Reaction to cues	22%

Hyperarousal (D) Symptoms	
Difficulty falling asleep	49%
Irritability and Anger	48%
Difficulty Concentrating	20%
Hypervigilance	58%
Startle Response	53%

Avoidance (C) Symptoms	
Avoid thoughts, feelings	28%
Avoid places, people	16%
Inability to recall	12%
Loss of Interest	16%
Detached from others	22%
Restricted range of emotion	26%
Sense of foreshortened future	

PTSD 6 Month Results

- The total percent of participants with PTSD at 6 months was 16%.
- PTSD symptoms showed varying rates of remission over 6 months. Flashbacks, diminished interest, and restricted range of affect had the highest rates of remission (36%, 31%, and 30% respectively).
- Symptoms of hyperarousal were again the most common.
- Anger was the most persisting symptom, with only 1 of 38 subjects (3%) with this symptom losing it by 6 months.
- In addition to being least likely to remit, anger / irritability was the most likely of all symptoms to newly onset over 6 months (10% with new onset over 6 months), making it the most frequent symptom (52%) at 6 months post deployment.

6 Month Deployment Related PTSD Symptoms Rates of Remission

Re-experiencing (B) Symptoms	
Unwanted Memories	19%
Distressing Dreams	25%
Flashbacks	36%
Psychological Reaction to cues	11%
Physiological Reaction to cues	7%

Hyperarousal (D) Symptoms	
Difficulty falling asleep	17%
Irritability and Anger	3%
Difficulty Concentrating	24%
Hypervigilance	18%
Startle Response	23%

Avoidance (C) Symptoms	
Avoid thoughts, feelings	13%
Avoid places, people	8%
Inability to recall	18%
Loss of Interest	31%
Detached from others	20%
Restricted range of emotion	30%
Sense of foreshortened future	25%

PTSD 12 Month Results

- The total percent of participants with PTSD at 12 months was 15%.
- Rates of new onsets were generally low at the diagnostic and symptom level. Two new cases met threshold criteria for PTSD at 6 months and 1 at 12 months.
- There was a significant decrease in severity in PTSD symptoms from baseline to follow-up, as measured by the CAPS total score. For the 81 subjects with six month data, the baseline mean was 26.5 (SD=22.8) and the six month mean was 24.2 (SD=23.4) ($t=2.17$, $p=.03$).
- For the 60 subjects with 12 month data, the CAPS score changed from 24.6 at baseline to 20.4 at 12 months ($t=2.08$).

12 Month Deployment Related PTSD Symptoms Rates of Remission

Re-experiencing (B) Symptoms	
Unwanted Memories	3%
Distressing Dreams	2%
Flashbacks	4%
Psychological Reaction to cues	5%
Physiological Reaction to cues	5%

Hyperarousal (D) Symptoms	
Difficulty falling asleep	3%
Irritability and Anger	12%
Difficulty Concentrating	0%
Hypervigilance	0%
Startle Response	8%

Avoidance (C) Symptoms	
Avoid thoughts, feelings	2%
Avoid places, people	1%
Inability to recall	3%
Loss of Interest	6%
Detached from others	5%
Restricted range of emotion	5%
Sense of foreshortened future	0%

Results cont.

Other Psychiatric Disorders - Baseline

- Co-existing psychiatric disorders endorsed within the first month of return are as follows: 14 % met full criteria for Major Depressive Disorder , 1% for Panic Disorder, 3% for Social Phobia, 1% for Obsessive Compulsive Disorder, 2% for Generalized Anxiety Disorder, 5% for Alcohol Abuse, 2% for Alcohol Dependence, and 3% for Drug Abuse.

Mental Health Treatment – 6 Month

- Additionally, of 81 subjects with available data, 26 (32 %) received some form of outpatient mental health treatment within the first six months of their return. Of these 26, 20 (77%) received individual treatment with or without medication, and 12 (48%) received medication only.
- The majority of those receiving mental health treatment (68%) reported receiving it from the VA hospital; 20% received treatment from the Vet Center and the remainder from private mental health or other medical professionals.

Factors correlated with PTSD

Warzone Trauma (Hoge)

- Severity of trauma exposure was a strong predictor of PTSD in terms of diagnosis and number of symptoms.
- Mean scores and standard deviations of items from the Hoge Combat Experiences Scale (possible range of 0-52) were 25.2 (4.1) and 14.4 (10.6) for those with and without PTSD, respectively ($t = 5.6$, $p < .0001$).
- The Hoge Scale score was also significantly correlated with the CAPS total score ($r = .47$, $p < .0001$).

Factors cont.

Factors significantly related to severity of PTSD symptom (DRRI)

- Level of education (lower) to be associated (X2 = (3) 9.5, p = .02).
- Pre-deployment life events scale from the DRRI was significantly correlated with the CAPS total score (r=.29, p=.018).
- Deployment environment (r=.41, p <.001).
- Relationships within unit –sexual issues (r=.26, p=.04), deployment concerns (perceived threat, safety) (r=.48, p < .0001), and exposure to nuclear, biological, chemical agents (r=.37, p=.006).
- Severity of PTSD was significantly associated with postdeployment support (r=-34, p=.006) and life events (r=.55, p<.0001).

Factors cont.

Factors not significantly related to severity of PTSD symptom (DRRI)

- Life and family concerns while in the war zone showed a non-significant correlation of .23.
- Relationships within unit (not sexual issues) a non-significant correlation of .20.
- Training and deployment preparation were not related (r = -.05).
- Age, race or ethnicity, and marital status were not related.
- Note - The number of women in the sample is too small to estimate differences by gender

Future Plans

- We look forward to working with the 169th Military Police who will be returning at the end of the month thanks to the assistance of Capt. Floyd and also Charlie Battery in September.
- Currently we are in the process of submitting additional grants in order to continue interviewing these soldiers through 3 years post deployment as well as interview a larger sample.
- Further expand biological sampling

Conclusions

- Overall our preliminary results indicate that a substantial proportion of our returning troops are experiencing significant symptoms as a result of their most recent deployment and are seeking treatment at an early point in their return.
- Continued recruitment and future analyses of our follow up data will allow us to increase our knowledge regarding the early course of PTSD, determine specific factors that increase risk for chronic PTSD following war-zone trauma and examine the interactive effects of PTSD and substance abuse and dependence in order to best treat our returning veterans.

Acknowledgements

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- Major General Bray
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- Brown Staff – Julianne Voss & Lauren Slater
- Department of Defense